

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-34 (Canceled)

35. (New) A process for producing a final mixture of at least two reactive gases A, B in an inert or base gas, comprising:

- mixing the gas A in the inert or base gas, to form a first mixture, the composition of which changes, during its formation, outside the flammability region of the ternary diagram of the A/B/inert gas mixture, or passes through the flammability region with one or more mixing times of the mixer(s) used, or a transit time through the flammability region, less than the chemical induction time of the first mixture;
- mixing the gas B into the first mixture, forming a mixture whose composition changes towards that of the final mixture, the composition of the mixture changing, in the ternary diagram, either without passing through the flammability region or by passing through the flammability region, with one or more mixing times of the mixer(s) used, or a transit time through the flammability region, less than the chemical induction time of the mixture.

36. (New) Apparatus for establishing the flammability risk of gas mixtures, each mixture comprising at least two reactive gases A, B, in an inert or base gas, or

for determining the order of mixing of the reactive gases into the inert or base gas, comprising:

- means for storing at least one database containing, for gas mixtures, data on the ternary diagrams of the mixtures, and the flammability regions in the diagrams for given temperature and pressure conditions;
- means for selecting a gas mixture and temperature and pressure conditions to be used for the gas mixture;
- means for displaying a ternary diagram and the flammability region of a mixture in the diagram;
- means for computing or establishing, for gas mixtures containing at least two reactive gases A, B in an inert or base gas, and for temperature and pressure conditions of these gases, a transit time for the mixture to pass through the flammability region of the corresponding ternary diagram; and
- means for storing at least one database containing, for gas mixtures, data on the induction times, or ignition times, of these mixtures according to the temperature and pressure conditions.

37. (New) The apparatus according to claim 36, further comprising means for computing, or especially means programmed for computing or establishing, for gas mixtures each containing at least two reactive gases A, B in an inert or base gas, and according to temperature and pressure conditions of these mixtures, chemical induction times of these mixtures.

38. (New) The apparatus according to claim 36, further comprising a database containing information on mixing times of mixers, and means for selecting a mixer.

39. (New) The apparatus according to claim 36, further comprising means for, or means especially programmed for, comparing a mixing time or a transit time through a flammability region of one of the ternary diagrams, and a chemical induction time of this mixture.

40. (New) Apparatus for establishing the flammability risk of mixtures, wherein each mixture includes at least two reactive gases A, B in an inert or base gas, or for establishing the order of mixing of these reactive gases into the inert or base gas, comprising means for computing, or means especially programmed for computing, as a function of temperature and pressure conditions;

- the ternary diagram of a mixture and the flammability region in the diagram;
- a chemical induction time of the mixtures.

41. (New) The apparatus according to claim 40, further comprising means for displaying a ternary diagram and the flammability region of a mixture in the diagram.

42. (New) The apparatus according to claim 40, further comprising means for computing a mixing time of a given mixer or for storing mixing times of a set of mixers.